2002 Update

to the December 2000 report

Neah Bay Rescue Tug

Report to the Washington State Legislature

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

January 10, 2002
Publication No. 02-08-001

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Cover Photo: The Washington rescue tug Barbara Foss (right) works with the Chinese tug De Da (left) to recapture the towline on the Atigun Pass. Photo by LT William Rimbach, USCG.

Abstract: This 2002 Update provides additional information on the events, activities and issues in 2001 surrounding the use of a rescue tug for the Strait of Juan de Fuca and Washington's outer coast. It expands upon the December 2000 publication, Neah Bay Rescue Tug, Report to the Washington State Legislature (WDOE# 00-08-023).

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to the December 2000 report

Neah Bay Rescue Tug
Report to the Washington State Legislature

(WDOE #00-08-023)

Prepared by:

Washington State Department of Ecology
Spill Prevention, Preparedness, and Response Program

January 10, 2002
Publication No. 02-08-001

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I. Summary and Recommendation

Background – The outer coast of Washington and the western Strait of Juan de Fuca are vulnerable to oil spills from the high volume of marine traffic carrying large quantities of oil as cargo and fuel. The dedicated rescue tug has been established to protect the valuable and sensitive natural resources on the outer coast of Washington and in the western Strait of Juan de Fuca. This report provides an update on the tug's activities since the first report was published in December 2000.

In 1991, the Washington Legislature provided for the establishment of an emergency response system for the Strait of Juan de Fuca. The Department of Ecology (Ecology) has fulfilled that responsibility by stationing a rescue tug seasonally near Neah Bay since early 1999. The 2001 Legislature appropriated $1.7 million to establish a dedicated rescue tug at Neah Bay for the 2001-2002 winter storm season, and provide a standby tug fund for emergency situations elsewhere in Puget Sound.

Ecology has contracted with Foss Maritime Co. to provide the dedicated tug. The *Barbara Foss* and its crew arrived in Neah Bay again on September 15, 2001 and will be available during the current winter storm season, providing at least 200 days of coverage. The Coast Guard dispatches the tug through an operating protocol with Ecology, when there are no other unencumbered commercial tugs in the area that can respond in a timely manner.

The tug provides emergency towing capability to assist disabled commercial vessels and to prevent casualties that could cause loss of human life and major oil spills. It can also escort high risk vessels, provide a lifesaving capability, operate as a spill response deployment platform during major casualties, and assist during salvage operations.

2000 Report and 2001 Legislation – On December 1, 2000, the Department of Ecology submitted a report to the legislature, *Neah Bay Rescue Tug – Report to the Washington State Legislature* (WDOE Pub. #00-08-023). That legislatively-required report summarized activities of the tug to that date and made the following request:

> *Ecology recommends that state funding be provided to station a rescue tug at Neah Bay while federal funding is pursued. Specifically, Ecology recommends that the legislature provide $3 million in stopgap funding for the 01-03 Biennium to provide the rescue tug for approximately 12 months.*
>
> *If long-term federal funding does not become available, the state would have the option to proceed with rulemaking. The rulemaking process would determine whether vessels transiting the northern coast and western Strait of Juan de Fuca should have a user-fee-supported rescue tug available during their passage.*

The report is available online at Ecology's web site (http://www.ecy.wa.gov/programs/spills) or in hard copy by calling (360) 407-7211. Among other information, the web site also provides a list of all rescue tug dispatches since 1999.

The 2001 state operating budget provided $1.7 million from the state general fund to the Department of Ecology to provide "charter tug services" for FY-02. The funding provided for:

> *"(i) the placement of a dedicated tug at Neah Bay for not less that 200 days in fiscal year 2002; and (ii) other safety tug services that may be released by the department at the request of the United States coast guard captain of the port for Puget Sound to the areas or incidents that the department deems to be of highest concern."*

The proviso language continued with the reporting requirement:

> *"By January 10, 2002, the department shall report to the appropriate committees of the legislature regarding the number of dispatches, response time and distance, and other factors pertaining to the safety tug services."*

Recent Rescue Tug Dispatches Confirm Tug's Value – Since the December 1, 2000 report was submitted to the Legislature, the U.S. Coast Guard and Ecology have dispatched the rescue tug to nine distressed vessels. The tug also participated in one major no-notice oil spill drill. Chapter III provides a summary of those dispatches.

The effectiveness of the tug and its crew in responding to those incidents affirmed the conclusion of last year's report that "a rescue tug should be permanently stationed at Neah Bay." Appendix B contains a letter from U.S. Coast Guard Captain of the Port for Portland, Captain James D. Spitzer, commending Ecology and the actions of the *Barbara Foss* in responding to the *Atigun Pass* incident. Appendices D through G contain the incident summary for the *Atigun Pass* and other recent incidents.

It is important to note that when the tug is dispatched, the operator of the vessel needing assistance is responsible for paying for the rescue tug's response. This has the effect of extending the number of days the tug is available and/or making additional monies available for other "safety tug services."

Other "Safety Tug Services" – Thanks to efforts by the dry cargo industry represented by the Puget Sound Steamship Operators Association, with support from the oil industry, the 2001 budget also authorizes Ecology to contract for additional tug services on an emergency basis. This allows Ecology to provide tugs when requested by the U.S. Coast Guard Captain of the Port for Puget Sound to respond "to the areas or incidents that the department deems to be of highest concern," such as a major wind storm causing vessels to drag anchor or break a vessel loose from its moorings. This valuable provision has not yet been used, but the services are available if needed.

Federal Obligation to Minimize Risk – The federal government should provide funding for future deployments of the tug based upon the following premises:

- The federal government is a *trustee of natural resources* in the area including the Olympic National Marine Sanctuary, Olympic National Park, and the coastal national wildlife refuges;

- The federal government *has designated certain species found in the area as threatened and endangered.* These species and their habitats would be affected by major oil spills;
- The federal government has a responsibility to *protect the treaty rights of Puget Sound tribes* in their usual and accustomed fishing areas;
- Washington is meeting a regional energy supply need. The north Puget Sound marine transportation corridor contains a regional crude oil refining center and is a *conduit of refined petroleum products to other western states*;
- The Strait of Juan de Fuca *conveys more tonnage of cargo to and from Pacific Rim ports* than any other west coast waterway;
- Puget Sound is *homeport* for a large portion of the nation's strategic naval fleet which also poses a risk of major spills; and
- There is *potential for international tension with Canada* should a major transboundary oil spill occur in this waterway.

The terrorist threat to the safety of Washington's marine transportation system and ports has necessitated that the Coast Guard move some of their coastal search and rescue, and marine environmental protection resources closer to the state's major ports. This has increased the gap in protection that exists on the outer coast and in the western Strait, as discussed in the next chapter. The Coast Guard has also asked Ecology to respond on their behalf to all oil spills less than 1,000 gallons. Under the current circumstances, the rescue tug is needed now more than ever.

However, due to the many complex missions of the Coast Guard and their recent focus on terrorism, **federal funding for the rescue tug should not be diverted from other priorities in the Coast Guard's budget**.

Last session, the Washington Legislature provided $1.7 million to station the rescue tug for one winter, hoping the federal government would fund the next winter's coverage. However, that funding has not been forthcoming. Other countries protect their sensitive shores with similar rescue tugs. Washington's coast, with its public lands and marine resources, deserves similar protection. (See Appendix C.)

Recommendation

Consistent with Governor Locke's proposed budget, **Ecology recommends that the Legislature provide $1.4 million in supplemental funding for fiscal year 2003** (July 1, 2002 – June 30, 2003) for:

- The placement of a dedicated tug at Neah Bay in fiscal year 2003; and
- Other safety tug services that may be released by the department at the request of the United States coast guard captains of the ports to the areas or incidents that the department deems to be of highest concern in the state.

The Legislature should consider sending a memorial to Congress asking for federal funding to station a rescue tug at Neah Bay (see appendix A). That funding should not be taken from the U.S. Coast Guard's budget, such that it would detract from the organization's many important missions.

II. Risk of Major Oil Spills

Washington's coastal waters commonly experience poor weather and difficult sea conditions. This combination increases the probability of vessel collisions and groundings, which place the state's sensitive and valuable coast at risk of major oil spills. Major oil spills don't occur often, but when they do, they can have enormous consequences to the state's environment, economy, and quality of life. The State of Oregon is still dealing with problems from 1999's drift grounding and oil spill from the freighter *New Carissa.*

The high risk of coastal spills is indicated by the fact that four of the largest oil spills entering marine waters in Washington state history have occurred within the rescue tug's operating area: the *General Meiggs* spill at Cape Flattery, the *United Transportation Barge* spill near Moclips, the *Tenyo Maru* spill at the entrance to the Strait of Juan De Fuca, and the *Nestucca Barge* spill north of Grays Harbor.

In 2000, approximately 9,935 commercial vessels and a large number of oil barges moved through the Strait of Juan de Fuca. This included – 8,376 cargo and passenger vessels; 1,164 oil tankers; and 396 large commercial fishing vessels. These vessels moved approximately 15.1 billion gallons of oil through north Puget Sound as fuel and cargo.

Since January 2001, nine large commercial vessels have been disabled in the Strait of Juan de Fuca and off Washington's coast, requiring assistance from the state-funded dedicated rescue tug *Barbara Foss.* The incidents have involved two container ships, one bulk cargo freighter, one chemical tanker, one oil tanker, one tug towing a decommissioned oil tanker, two tugs towing large oil barges, and one large commercial fishing vessel.

The gap in existing protection – Puget Sound benefits from a number of spill prevention mechanisms, but the state's outer coast and the Strait of Juan de Fuca do not enjoy this same prevention infrastructure. The use of state pilots, the common presence of unencumbered commercial tugs, and escort tugs for oil tankers are all available east, but not west, of Port Angeles. The Coast Guard's vessel traffic radar system does not cover most of the outer coast. And, besides increasing risk, the rigorous ocean conditions limit the use and effectiveness of oil spill containment and recovery systems. Fortunately, the Coast Guard has continued to take immediate action in partnership with Ecology to dispatch the rescue tug to protect the state's coast.

Important Lessons Learned During Fall 2001 – Notable among this fall's incidents are the three and a half day drifting of the decommissioned oil tanker *Atigun Pass*, and the case of the *Andino*, where the captain delayed complying with the Coast Guard's order to retain tug assistance (see incident summaries).

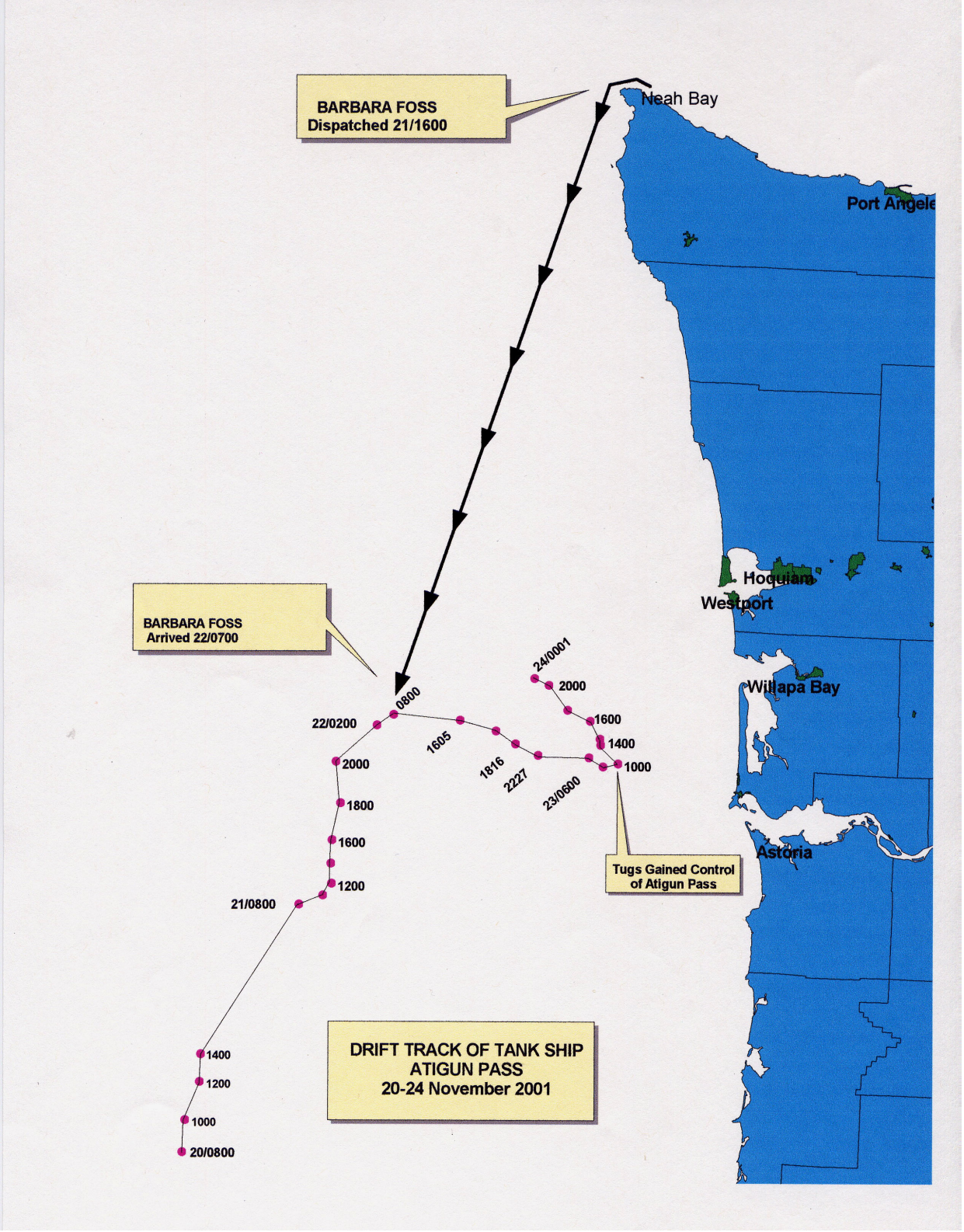
The *Barbara Foss* played a key role in rescuing the drifting decommissioned tanker, *Atigun Pass*. The tanker carried about 25,000 gallons of oil, threatening Washington's coast at the end of November 2001. A potential environmental calamity was averted when the tanker was finally

brought under control by the combined efforts of the U.S. Coast Guard, the tanker's Netherlands-based shipping agent, and the Washington Department of Ecology.

Picture courtesy of U.S. Coast Guard.
Tugs De Da *and* Barbara Foss *work to get the drifting 906-foot tanker* Atigun Pass *back under tow. The 321-foot tug* De Da *is in foreground, the 126-foot tug* Barbara Foss *can be seen beyond the tanker.*

The *Atigun Pass* was being towed to China for scrap, when the towline parted off the Oregon coast on Monday, November 19, 2001. The towing vessel, the Chinese tug *De Da*, was not able to recover the line. By Wednesday, Nov. 20, the *Atigun Pass* was 70 miles west of the Columbia River, being pushed north and east by a major Pacific Ocean storm with gale force winds and 25-foot seas. The storm had closed the Columbia River bar, where the closest tug, in Astoria Oregon, was located. With time running out, Ecology dispatched the *Barbara Foss* from Neah Bay to be ready to help the *De Da* if necessary. The rescue tug reached the scene early Thursday morning, November 22, Thanksgiving Day. The *Barbara Foss*' crew was able to immediately pick up the emergency towline from the tanker and transfer it to the Chinese tug, but the line broke at the *De Da's* stern before it could be fully deployed.

On Friday, Nov. 22, two more tugs arrived, Crowley Maritime Services' *Sea Victory*, from Astoria and *Sea Venture*, from Seattle. A salvage team was airlifted onto the tanker to attach a temporary towline to the *Sea Venture*. On Saturday, the *Atigun Pass* was still dangerously close to the Washington coast. (See *Drift Track of Tank Ship Atigun Pass*, page 11). The *Barbara Foss* was able to recover the emergency towline once again and transfer it to the *De Da*, whose crew successfully attached the "insurance" cable to its towing system. By Nov. 24, the tanker was once again on its way to China.


BARBARA FOSS
Dispatched 21/1600
Neah Bay
Port Angele
Hoquiam
Westport
BARBARA FOSS
Arrived 22/0700
Willapa Bay
24/0001
2000
1600
1400
1000
0800
22/0200
1605
1816
2227
23/0600
2000
1800
1600
1200
21/0800
Astoria
Tugs Gained Control
of Atigun Pass
1400
1200
1000
20/0800
DRIFT TRACK OF TANK SHIP
ATIGUN PASS
20-24 November 2001

During the incident, the crews of the Foss Maritime and Crowley Marine tugs *Barbara Foss*, *Sea Victory* and *Sea Venture* performed admirably under difficult weather conditions to assist the tug *De Da* in recovering the drifting *Atigun Pass*. The services of professional salvors from Rivtow Marine, some of whom were airlifted to the drifting tanker, were also key to the success of the operation. Helicopter pilots from the U.S. Coast Guard Air Station Astoria and a private helicopter service, Helicopter AirTransport, also aided in the operation.

What's at stake – Having a dedicated rescue tug available at Neah Bay increases safety for vessel crews, and for the Olympic National Park, the Olympic Coast National Marine Sanctuary, tribal lands, commercial fishing and shellfish industries, endangered salmon runs, and the many bird and marine mammal populations (including Washington's only permanent sea otter colony) that inhabit the area.

Risk, as defined by risk management experts, is a function of the probability of an event and the consequences of that event. Serious vessel incidents continue to occur. Such incidents can lead to major spills and such spills cause serious damage to the state's environment, economy and quality-of-life. Ecology therefore concludes that a dedicated rescue tug is needed to mitigate this risk.

III. Recent Rescue Tug Dispatches

- **On April 29, 2001, the American tugboat Caribe *Challenger* –** which was towing a 330-foot tank barge loaded with **2,000,000 gallons of gasoline**, had to shut down a main engine due to a coolant leak. The *Caribe Challenger* and its barge were about 45 miles south-southwest of Cape Flattery. There was wind from west-northwest at more than 20 mph and a west-northwest swell of ten feet. The *Barbara Foss* was dispatched to escort the tug as it slowly proceeded up the coast on one engine and entered the Strait of Juan de Fuca. Another tug from Port Angeles met the two tugs near the entrance and took over escort duties as the *Caribe Challenger* and the barge proceeded to Anacortes.

- **On April 30, 2001, the 600-foot Norwegian chemical tanker *Jo Brevik* –** experienced a faulty fuel valve that partially disabled the main engine while the vessel was outbound in the Strait of Juan de Fuca. The ship, with **a capacity of 33,500 tons, carried a bulk cargo of highly corrosive liquid caustic soda**. The Coast Guard directed the ship to proceed at least 15 miles west of the entrance before shutting the engine down for repairs and to have the *Barbara Foss* stand by during the down time. Winds were southwest 25-31 mph with a six-foot swell.

- **Polar Tankers Inc. Drill –** On May 22, 2001, the rescue tug *Barbara Foss* participated in a no-notice spill response equipment deployment drill with Polar Tankers Inc. The drill tested the rescue tug and Polar Tankers Inc. in their notification, mobilization and response to a hypothetical collision of a fishing vessel and a crude oil tanker near the entrance to the Strait of Juan de Fuca. The tug's initial assignment was to tow the disabled fishing vessel to safety, then to provide logistics support, assist with boom deployment and salvage, and provide a platform for command and control. The tug performed very well. The drill evaluators confirmed the value of locating a capable vessel in Neah Bay for salvage and spill response.

  The drill also demonstrated that Polar Tankers Inc. was unable to respond to an oil spill in the vicinity of the entrance to the Strait of Juan de Fuca in accordance with its approved oil spill contingency plan and Washington's spill response planning standards. Polar Tankers Inc. responded immediately to resolve the deficiency. **This and two other similar unannounced 2001 spill drills resulted in the state's coastal response capability being significantly upgraded.**

- **On September 25, 2001 the tanker *British Hawk*** – could not apply power in reverse after leaving Rosario Strait in the San Juan Islands. The Coast Guard Captain of the Port required a tug escort as far as Port Angeles. Ecology dispatched the *Barbara Foss* from Neah Bay as a **precautionary measure** while the vessel passed out of state waters into the Pacific Ocean.

- **On October 24, 2001 the 700-foot Greek bulk freight ship *Tetien Trader*** – ran into a storm 500 miles off the Strait of Juan de Fuca and was damaged, forcing it to return to port for repairs. **A large wave over the stern flooded a switchboard, shorting out the electrical service to both of the ship's radar systems**. The Coast Guard directed the ship, which was

loaded with thousands of barrels of bunker fuel, to arrange for a tug escort as it transited the Strait of Juan de Fuca to Victoria, BC. Foss Maritime Co. was contracted to provide the tug escort. Foss found it difficult to get a regular escort tug to the entrance to the Strait in time to meet the ship so arrangements were made for the rescue tug *Barbara Foss* to perform the first portion of the escort before passing off to the tug *Arthur Foss*. The ship's arrival time subsequently slipped, allowing the *Arthur Foss* to go all the way to the Strait entrance and perform the full escort. The *Barbara Foss* was first on scene near buoy "J" and provided assistance with communications as the ship entered the Strait.

- **On November 19, 2001 the decommissioned tanker *Atigun Pass*** – broke its towline and drifted for three and a half days off Washington's coast while a major storm swept through the area. This potential environmental calamity was averted through five days of concerted effort by the Coast Guard, the tanker's shipping agent, and the Department of Ecology before the towline could be re-secured and the tanker and its original tug, the *De Da*, could proceed on their voyage. **The *Barbara Foss* was the first tug on-scene and its maneuverability, specialized equipment, and highly trained crew played a critical role in the tanker's ultimate rescue**. (See Appendix D.)

- **On November 30, 2001 the container ship *BBC Peru*** – had a main engine failure and drifted for over two hours 12 miles west of the entrance to the Strait of Juan de Fuca. The Coast Guard's Captain of the Port of Puget Sound required the vessel to have a tug stand-by while the engine was worked on. The rescue tug *Barbara Foss* was the nearest tug capable of providing immediate assistance. The vessel's crew could not restore full power and the ***Barbara Foss* escorted the vessel to Port Angeles** at reduced speed. The weather forecast at the time of the incident was for winds to 46 mph with swells to 15 feet. (See Appendix E.)

- **On December 9, 2001 the 580-foot container ship *Andino*** – had an engine failure. It drifted for five hours well inside the Strait of Juan de Fuca, presenting a collision risk to other vessels using the shipping lanes. **The captain of the *Andino* initially refused the Coast Guard's verbal order to take a towline from the *Barbara Foss***. The ship continued to drift while the crew attempted to repair the engine. The *Andino*'s captain finally accepted a towline from the *Barbara Foss*. Eventually another tug, the *Lindsey Foss*, arrived to relieve the *Barbara Foss,* and towed the ship to Port Angeles. (See Appendix F.)

- **On December 13, 2001 the 112-foot commercial fishing vessel *Deep Pacific*** – lost electrical power during a major storm due to contaminated fuel. The contaminated fuel also put the ship's propulsion at risk. **Winds on scene were westerly at 57-63 mph with 16-20 foot seas**. At the time the crew requested assistance from the *Barbara Foss*, the ship was 31 miles west-northwest of Cape Flattery. The crew managed to maintain propulsion and the *Barbara Foss* escorted the boat to Port Angeles. (See Appendix G.)

- **On January 3, 2002 the tug *Pacific Avenger*** – lost its power steering about 15 miles west of Cape Flattery. At the time of losing its power steering, the *Pacific Avenger* was towing a 430-foot barge, *Barge 103*, to Portland from Puget Sound. The barge was loaded with about **2,100,000 gallons of diesel**. It was estimated to be about 40 percent full.

The tug/barge experienced winds from the south at 18-23 mph and 12 foot swells. Initially, the rudder went "hard over" and tripped off all power to the steering system. A backup hand-operated hydraulic pump allowed limited rudder control. The crew partially restored operation of the power hydraulic steering system, but was not able to reference the rudder angle indicator or use the autopilot. As a precautionary measure, they requested an escort tug and turned back toward the Strait of Juan de Fuca to complete steering system repairs and testing. The tug and tow were escorted by the *Barbara Foss* to Port Angeles.

- **Other Vessel Incidents Have Occurred**

  In addition to the nine commercial vessel incidents to which the *Barbara Foss* was dispatched, Ecology is aware of five additional significant vessel incidents in the tug's operating area during the time period covered by this report:
  - Two of the incidents occurred during the summer when the *Barbara Foss* was not on station.
  - Three of the incidents did not require the *Barbara Foss* to be dispatched due to the nature of the situation – for example, two of the vessels were far enough "to sea" that other tugs were able to be dispatched from Puget Sound.

Appendix A

October 23, 2001 Letter from Governor Locke to Washington's Congressional delegation

Requesting federal funding for the Rescue Tug

GARY LOCKE
Governor

STATE OF WASHINGTON
OFFICE OF THE GOVERNOR
P.O. Box 40002 • Olympia, Washington 98504-0002 • (360) 753-6780 • www.governor.wa.gov

October 23, 2001

The Honorable Patty Murray
United States Senate
173 Russell Senate Office Building
Washington, DC 20510

The Honorable Maria Cantwell
United States Senate
717 Hart Senate Office Building
Washington, DC 20510

The Honorable Norm Dicks
United States House of Representatives
2467 Rayburn House Office Building
Washington, DC 20510

The Honorable Rick Larsen
United States House of Representatives
1529 Longworth House Office Building
Washington, DC 20510

Patty

Dear Senators Murray and Cantwell and ~~Congressmen~~ Dicks and Larsen:

I am writing to request your help in securing federal funding for the Neah Bay rescue tug. This vessel is invaluable in protecting our state's shoreline and marine waters from oil spills.

As background, a majority of the bipartisan North Puget Sound Oil Spill Risk-Management Panel voted in favor of establishing a permanent, government-funded rescue tug at Neah Bay. Our state committed $1.5 million for emergency tug services last winter, and another $1.7 million for the coming season, but I am concerned that the current economic downturn may jeopardize state funding for 2002-03.

The Coast Guard has had to redeploy some of their coastal personnel and vessels to augment the security of major Puget Sound ports (news article enclosed), even while they have determined that the risk of major oil spills continues to increase. This redeployment reduces our coastal search and rescue, security and small-vessel towing capabilities. The multi-purpose rescue tug *Barbara Foss* (which arrived at Neah Bay on September 15) is even more indispensable given the reduced Coast Guard presence. In addition to its primary mission of assisting disabled vessels, the tug is available to monitor or escort vessels that pose security or safety risks, provide initial containment during spill events, conduct search and rescue operations, and potentially assist the Coast Guard in any terrorist-initiated chain of events.

I urge you to support dedicated federal funding for the rescue tug during the ongoing Congressional budget discussions related to homeland security. Such funding should be an *addition* to the Coast Guard's operating budget, as we do not want to detract in any way from the Coast Guard's ability to complete its many important missions.

I appreciate any assistance you can provide. If you have questions, please call me or Tom Fitzsimmons, Department of Ecology Director, at (360) 407-7001.

Sincerely,

Gary Locke
Governor

Enclosure

cc: RADM Paul Pluta, U.S. Coast Guard
RADM Erroll Brown, U.S. Coast Guard
Tom Fitzsimmons, Department of Ecology

Appendix B

November 30, 2001 Letter from U.S. Coast Guard Captain of the Port, Captain James D. Spitzer to Ecology Columbia River Field Office Supervisor Captain John Thornton

Commending Ecology and the Actions of the Rescue Tug BARBARA FOSS in Responding to the ATIGUN PASS Incident

U.S. Department of Transportation
United States Coast Guard

Commanding Officer
U.S. Coast Guard
Marine Safety Office

6767 N. Basin Avenue
Portland, Oregon 97217-3992
Staff Symbol: CO
Phone: (503) 240-9314
FAX: (503) 240-9302

5216
November 30, 2001

Captain John Thornton, Supervisor
Spills Program
Washington Department of Ecology
811 SW 6th Ave, 8th Floor
Portland, OR 97204

Dear Captain Thornton:

Thank you, Val Scott, and Captain Ted Paige for the support given during the response to the T/V ATIGUN PASS. For four days amid the Thanksgiving Holiday you dedicated your time and resources in a coordinated effort with my office to ensure appropriate actions were taken to prevent the grounding and possible discharge of roughly 21,000 gallons of diesel and heavy fuel oil onto the Washington and Oregon coastline from this vessel.

I also commend your foresight and decisiveness to conduct a required exercise with the tug BARBARA FOSS during this critical time. The impact of having a small, maneuverable tug was noticed almost immediately as the Tug BARBARA FOSS was first on scene and quickly gained control of the polypropylene messenger line attached to the emergency-towing bridle. On Saturday, the Tug BARBARA FOSS was again successful in retrieving the emergency-towing bridle before it transferred final control of the T/V ATIGUN PASS to the Tug DE DA which allowed the T/V ATINGUN PASS to be successfully towed out of the waters of the United Sates.

Your dedication and commitment is greatly appreciated and we look forward to working with you in the future.

Sincerely,

JAMES D. SPITZER
Captain, U.S. Coast Guard
Commanding Officer

Appendix C

"The Case for Extra Protection" from *International Tug & Salvage*

The case for extra protection

by Jean Labescat, vice-president, International Salvage Union

There can be few concepts as commercial as 'no cure–no pay', the traditional basis of the marine salvage contract. Success brings reward. Failure produces nothing. Over the past 20 years, however, concern about damage to the marine environment has led to new salvage concepts, such as Special Compensation and the newly introduced SCOPIC Clause. These departures from the 'no cure–no pay' principle recognise that, in the final analysis, a response to a pollution threat should not depend entirely on the salvor's willingness to accept such an extreme form of commercial risk.

Concern for the environment and recognition of the salvor's lead role in pollution defence has also resulted in partnerships between governments and salvors, with the aim of providing an extra tier of protection for vulnerable coastlines.

Until the 1970s, governments displayed little interest in marine salvage, but a series of major spills demonstrated that new thinking was required. Today, many governments have contracts with salvors that provide an extra measure of security, by retaining salvage tugs and other resources. As a result, a small number of powerful salvage tugs are now stationed at strategic locations, held in readiness to respond to marine casualties which have the potential to cause environmental damage.

The concept of retained salvage services originated in South Africa. Since the mid-1970s arrangements have been in place which ensure that salvage resources are available when needed in South African waters. The retainer solution was also adopted by the French Government a few years later, following the ***Amoco Cadiz*** spill. For the past 22 years, three large salvage tugs have been held at permanent readiness, tasked to intervene and deal with any pollution threat to the coastline of northern France and the Mediterranean Riviera.

In Britain, the grounding in 1993 of the tanker ***Braer*** served as the catalyst for another partnership agreement of this type. This disastrous spill resulted in an inquiry headed by Lord Donaldson. The report, *Safer Ships, Cleaner Seas*, favoured Government-sponsored strategic salvage cover at specific locations around the UK coast. The Government acted. A winter season contract was awarded to a salvor, for station tugs covering the Dover Strait and the Minches.

Similar schemes have been established in a number of other EU Member States, including the Netherlands, Germany and Spain. The Netherlands, for example, has a large salvage tug based at Den Helder, which is required to put to sea, at 15 minutes' notice, whenever weather conditions deteriorate.

In Spain, state agencies and salvors co-operate under a national plan for salvage and pollution prevention. The central objective is to avoid a spill disaster, which could have severe consequences for tourism - one of the country's most important industries.

A review of British and French arrangements for retained salvage services is instructive, not least because they have a common focal point - the English Channel. The French have the most experience of standby arrangements, as contracts for this purpose have been in place for over two decades. Under a time charter, the French government contributes to the upkeep of designated station tugs, in return for an operational commitment from the salvor. The contract requires the tugs to be available at 40 minutes' notice. They put to sea in bad weather and patrol offshore, ready to respond to any emergency.

When a station tug is actively engaged in a salvage, the salvor is responsible for obtaining remuneration under a Lloyd's Form or other contractual option. The partnership with the French Government provides for the sharing of remuneration. A proportion of any reward for salvage services is returned to the State, after costs are taken into consideration. It is interesting to note that salvage arbitrators accept the performance of salvage by the salvor, despite State involvement, as a commercial operation and they make awards on that basis. This recognises the underlying purpose of such partnerships.

As mentioned above, the French scheme was devised after the grounding of ***Amoco Cadiz*** off Portsall, Brittany, in March 1978. This released 220,000 tonnes of Iranian crude oil onto the shores of north western and northern Brittany. The French Government responded in a number of ways. The International Maritime Organisation agreed changes to traffic separation lanes off Ushant to increase the 'drift time' and, therefore, the response time available to assist vessels with engine failure.

There was also a move to obtain optimum benefit from French salvage assets. A contract was developed to guarantee the availability of large salvage tugs. Under the current contract, which protects the coastline of northern France, two 12,800hp tugs (160 tonnes bollard pull) are on station. ***Abeille Languedoc*** is based at Cherbourg whilst ***Abeille Flandre*** is stationed at Brest. When one of the large tugs is in scheduled downtime, its place is taken by a third tug. Schedules are arranged to ensure that one of the big tugs is always available at Brest - to cover the most vulnerable part of the coast. In addition, one 8,000hp tug (100 tonnes bollard pull), ***Merou***, is on station at Toulon to cover the Mediterranean coast and Corsica.

The tugs are under the operational control of the Prefet Maritime at Brest, Cherbourg and Toulon, who also have responsibility for organising regular exercises, to test response capabilities. Given the instant availability required of a station tug, the very highest standards of condition and maintenance are essential. The crews of the tugs serve 45-day duty periods and are always on standby, unless on leave. Their vessels have an endurance of 35 days and each carries a substantial range of salvage equipment, including pumps, compressors, generators and diving gear.

The standby tugs have carried out some 1,800 tasks over the past 20 years, including around 400 salvage operations. Channel ferry, ***Stena Challenger,*** went aground during a stormy night in September 1995, while

Abeille Languedoc.

making for Calais, but fortunately, only lightly. Port tugs were mobilised from Calais and Dunkerque, while ***Abeille Languedoc*** and ***Abeille Picardie*** proceeded to the scene from the south. Within a short period, the ferry was refloated and towed to Calais.

A collision in November 1995, involving the 6,000m³ LPG carrier ***Happy Fellow*** and a general cargo vessel, occurred off Le Havre, in the entrance to the Seine. The gas tanker was proceeding down river, with the other ship heading towards Rouen. As they approached each other, the general cargo vessel suffered a rudder failure. ***Happy Fellow*** was damaged, but, fortunately, did not catch fire. As a precautionary measure, the salvors deliberately grounded the LPG tanker, to win sufficient time to pump and patch the casualty, which was then gas-freed and inerted prior to entry into Le Havre and drydocking. One special feature of this case was the extensive precautions taken to avoid pollution from the flooded engine room.

The container vessel, ***MSC Rosa M***, developed a severe list off Cherbourg in December 1997. Whilst ***Abeille Languedoc*** immediately made for the scene, the casualty's crew was airlifted to safety. This case had similarities to the ***Happy Fellow*** incident, as ***MSC Rosa M*** had to be beached in order to perform a successful salvage. Hostile weather added to the salvage team's difficulties, but the vessel was dewatered and stability restored prior to entry into Le Havre. The engine room was then pumped out – with strict procedures to prevent pollution. This was followed by discharge of the cargo at the berth.

With the ability to look back over a period exceeding 20 years, the French Government regards the standby salvage scheme as an effective means of pollution defence.

For the UK, the loss of 85,000 tonnes of crude oil from ***Braer***, which grounded and broke up in the Shetlands in 1993, had many consequences. The first of a series of standby salvage contracts was signed the following year. This pilot contract, for the winter months, commenced 1st December 1994. Under the agreement, an ISU salvor provided two ETVs (Emergency Towing Vessels), one positioned in the Dover Strait and the other in the far north, at Stornoway in the Outer Hebrides. Services have been provided ever since, on a winter season basis.

The **Sea Empress** *incident off Milford Haven.*

Another major spill took place in 1996, when ***Sea Empress*** grounded at Milford Haven. During the following year, a third ETV was added to the scheme - based at Falmouth.

Incidents in the English Channel last year included the collision involving ***Ever Decent*** and ***Norwegian Dream***. This incident occurred in August. Recently, the French Government decided to go into partnership with the British Government, with a view to extending coverage in the Dover Strait to the summer months.

Salvage resources for pollution defence in the English Channel zone now consist of the two British tugs, at Dover and Falmouth, and two French tugs, at Brest and Cherbourg. The governments have arrangements in place for co-operation should a major casualty or pollution threat arise in the Channel. Equally, British and French ISU salvors have a co-operation agreement, allowing them to call on each other's resources, as required.

British arrangements in the south currently consist of a winter only contract extending to 2003, with summer coverage at Dover now provided on a seasonal basis. The Dover tug is the 10,560hp ***Far Turbot*** (100 tonnes bollard pull). The Falmouth tug, tasked with protecting the Western Approaches, is the 12,240hp ***Far Minara*** (127 tonnes bollard pull).

Under a separate, winter only contract, two large salvage tugs now protect the UK's northern waters – one at Stornoway and the second in the Fair Isle area, between Orkney and Shetland. The Fair Isle tug was introduced last year. A number of incidents and near misses in this region underlined the need for ETV coverage. In this connection, the loss of the small cargo vessel, ***Green Lily***, in the Shetlands, was a traumatic event. This ship went aground in appalling weather and a helicopter winch man lost his life during the rescue of the crew. In its report on the ***Green Lily***, the Marine Accident Investigation Branch called for an ETV to be stationed in this area.

Under the existing arrangements, the ETVs patrol at sea or, if at anchor, are maintained at 30 minutes' readiness. On average, the Dover standby tug is tasked on 40-50 occasions in a six-month period. Most operations consist of responses to vessels with engine breakdowns. The Falmouth tug has completed its second winter season on standby. It was mobilised over 20 times during each six-month period.

The ETVs are under the operational control of the MCA. When an ETV becomes involved in a salvage, the contract with the MCA is

Far Minara

suspended and the response takes on a commercial character. A common element with the French arrangements is the sharing of remuneration. A proportion of remuneration is received by the MCA, as a contribution towards the cost of maintaining standby cover.

British ETVs have intervened in many potentially serious incidents and successfully prevented a number of groundings. One case in the Channel involved the large fish factory vessel ***Ionava***. During 1995, this vessel suffered an engine breakdown in a Force 10 south westerly and began to drift towards the Kent coast at Dungeness, with 300 tonnes of heavy fuel oil in her bunker tanks. The crew attempted to anchor the vessel, but the violent storm continued to push the vessel towards the shore. Fortunately, the ETV reached the casualty in time and the vessel was towed to safety. Incidents the following year included a very similar case, this time involving the container vessel ***Cam Azobe Express***, which reported an engine failure off the Kent coast. Once again, this situation ended in a successful tow to safety.

In late 1997, a British ETV and a French ETV responded to the plight of the ro-ro ***Kukawa***, which reported fire when off the Channel Islands. The tugs participated in the fire-fighting effort. When the blaze was brought under control, the casualty was towed to Falmouth – where the fires were finally extinguished at the quayside. This case demonstrates the vital role that port authorities often play in salvage operations. In some instances, it is difficult to arrange a port of refuge, so increasing the human and environmental hazards involved in salvage. Ultimately, success in some cases will depend on the active co-operation of port authorities.

The crew of the Falmouth ETV ***Far Minara*** got off to a brisk start in 1998, when tasked on 1st January to make for the 20,000dwt tanker ***Santa Anna*** which had run aground off Torquay during bad weather. Fortunately, the tanker was in ballast, but its 500 tonnes of bunkers and 2,000 tonnes of slops still represented a significant pollution threat. The ETV assisted in the salvage, which resulted in the refloating of the vessel.

Operations in 1998 also included the response to the 70,000dwt OBO ***Bona Fulmar***, which was involved in a collision with a chemical tanker in foggy conditions off the Kent coast. The OBO's cargo consisted of 65,000 tonnes of gasoline; some 6,000 tonnes was lost as a result of the collision. There was no fire, but still air increased the hazards at the scene. The Dover ETV's crew worked to gas-free damaged tanks and carry out temporary repairs. The casualty was then escorted to Rotterdam.

Recent winters have been relatively quiet in UK waters. Nevertheless, the ETVs have performed a series of rescue tows in hostile weather conditions. Some of these cases had the potential to turn into major incidents.

Ever Decent *ablaze in the English Channel.*

They include ***Candourity***, ***Ross Alcedo***, ***Viking Princess*** and ***Boisterence***.

The British ETVs participate in frequent exercises to test the co-ordination and effectiveness of all response resources, at sea and ashore. Two or three MCA-supervised exercises are held each year. These are full-scale response drills, lasting up to 48 hours and often involving a vessel (simulating a casualty), one or more ETVs, helicopters, spill response and clean-up agencies and shore-based organisations. The UK has a new National Contingency Plan for response to shipping casualties and one objective of current exercises is to test elements of this plan. The next major UK exercise is scheduled for October when a two-day drill will be co-ordinated from Falmouth and will involve ***Far Minara*** and a tanker.

Joint exercises involving British and French response teams are also organised. 'MANCHEX 99', for example, took place last November, which involved ***Far Turbot*** and ***Abeille Languedoc***, responding to a VLCC incident in mid-Channel. Such exercises take place under the auspices of the 'Mancheplan' – a bilateral agreement, between France and the UK, which provides for co-operation when responding to marine pollution threats and undertaking search and rescue operations.

Partnering arrangements between Governments and salvors are here to stay. These schemes provide additional security and also offer a focal point for training and drills - which improve the efficiency of response when real emergencies occur. The investment involved is not insignificant. Equally, costs are low when measured against the scale of the risk. The prevention of just one ***Sea Empress*** or ***Braer*** would cover the costs of standby salvage services for decades. It is always difficult to measure the return on such an investment, when the return – pollution prevention – is invisible. Yet, every few years or so, an incident occurs which results in very severe environmental damage. Such events underscore the value of an extra tier of security.

Partnering between Governments and salvors can take many forms. In some countries, there is no structured scheme, but Government agencies have powers to mobilise tugs and other salvage resources when needed to confront an emergency. This approach has obvious cost advantages but, on the other hand, it has some crucial disadvantages. Firstly, the Government has no influence over the character of the resources (for example, tug size and location). Secondly, opportunities to train and exercise together are absent. From the governmental standpoint, a more structured approach has the advantage of direct input, with opportunities to test the operational capabilities and performance of all concerned – including the all-important command and control infrastructure.

The South African and French schemes have stood the test of time. They have provided models for other governments seeking to put in place national schemes for pollution defence, in partnership with salvors. Given the dominant trend of environmental concern, it is likely that the existing schemes will evolve in the years ahead, with an emphasis on new thinking in areas such as command and control. The central aim, as always, is to make the optimum use of available assets. There can be little doubt that more governments will adopt the standby salvage approach.

One point of growing concern, however, is that many of the tugs, which are in the frontline pollution defence role and retained for standby duties, are now rather elderly. Sooner or later, they must be replaced. Are governments sufficiently committed to accept higher rates applicable to dedicated, purpose-built new tonnage? A second concern is the issue of ports of refuge. Central government has a role to play in this area. Ports of refuge need to be identified and arrangements put in place to ensure that vessels in difficulty – and salvors assisting a casualty – receive the attention and support they require, without delay.

The ISU believes that salvage is an activity best performed by commercial companies. The growth in standby salvage arrangements has not eroded the commercial status of the industry. Only a very small proportion of the salvage industry's total assets are committed to standby schemes. The government schemes, in effect, merely focus a small proportion of these resources into areas where they are most needed.

This paper was first presented at Seawork 2000, Southampton, UK, on 20th June.
The author gratefully acknowledges the generouus assistance of Mark Hoddinott, salvage master at Howard Smith, UK, in its preparation.

Review expected to extend UK's ETV coverage...

As this issue of *IT&S* goes to press, the UK's Maritime & Coastguard Agency (MCA) is shortly expected to announce the findings of a far-reaching review of ETV requirements and policy.

Currently, the AHTS vessels ***Far Turbot*** and ***Far Minara***, operated by Howard Smith, are contracted until 31st March 2003, to cover the Dover Straits and Western Approaches, respectively, during the winter months only. In addition, ***Far Turbot*** has been given a one season only contract to provide coverage this summer.

Klyne vessels ***Anglian Prince*** and ***Anglian Monarch*** will be stationed in Scottish waters (Stornaway and Fair Isle) this coming winter under a contract that expires on 31st March 2001.

Although no details of the MCA review are officially known, it is widely thought that, following intense industry pressure, led by *IT&S*, future coverage at all four stations will be all-year-round. One close observer of the situation says: "This is a very high probability".

The UK government's much vaunted PPP (public/private partnership) policy is also fuelling speculation that the MCA wants to at least part-own ETV vessels in a consortium with a major operator. Such a prospect has been hinted at by leading MCA officials on several occasions and it is further rumoured that a specification has been drawn up. We await the outcome with interest.

Anglian Monarch *is one of two Klyne vessels protecting Scottish coasts.*

...but US votes against

The stationing of a designated rescue tug at Neah Bay continues to be a controversial subject, writes Jim Cole of the Seattle-based Elliott Bay Design Group. The risks of oil spills have been debated around Puget Sound since the *Exxon Valdez* incident in Alaska in 1989. Shortly after this incident, a loaded tanker lost power at the entrance to the Strait and other merchant ships have had temporary losses of power or steering since then.

Until a permanent decision has been made, the State of Washington, with monetary assistance from three federal entities, the US Navy, the Department of Transportation and the Environmental Protection Agency, has contracted rescue tugs for the last two winters. A tug from Crowley Marine Services was on station during the winter of 1998/99, followed last winter by the 4,000hp coastal and harbour tug, ***Barbara Foss***.

The North Puget Sound Oil Spill Risk Management Panel has spent nine months studying the risks of oil spills from shipping accidents in North Puget Sound and the Strait of Juan de Fuca and this was one of the issues raised at a meeting held in Seattle on 10th July. The result of a vote by the 20 members for a designated rescue tug was 14 to 6 in favour. This is a clear majority with all of the elected officials being in support of a tug as well as the environmentalists, the Makah Tribal Council (the traditional home of the Makah Tribe is at the entrance to the Strait of Juan de Fuca), and the two oil industry representatives.

Barbara Foss

All democratic processes can occasionally create a strange agreement as they evolve. The one created by The Oil Spill Risk Management Panel was that if more than two members voted against an issue, it would not pass. Therefore, a vote of 14 to 6 was not good enough.

Reasons given by the Oil Spill Risk Management Panel for voting against the designated rescue tug were that it would cost millions of dollars each year with little real benefit. The local industry has decided to rely on their 'tug of opportunity' system, which has up to 100 tugs working at all times. A 'tug of opportunity' would be called upon to respond to an emergency by switching its tow to another tug or to anchor it. Significant improvements in technology and regulations have raised the performance levels of the local tugs and tug companies, but the question remains. Does the 'tug of opportunity' system guarantee that a tug will be available with the size, power, and speed to prevent an accident in heavy weather?

Appendix D

Incident Summary on the Drifting Tanker *Atigun Pass*

Incident Summary on the Drifting Tanker, *Atigun Pass*

Photo by LT William Rimbach, USCG

Tugs De Da *and* Barbara Foss *work to get the drifting 906-foot tanker* Atigun Pass *back under tow. The 321-foot tug* De Da *is to the left of the 126-foot tug* Barbara Foss*.*

A potential environmental calamity was averted during Thanksgiving week, when a decommissioned oil tanker drifting for three and one-half days off the Washington and Oregon coasts was finally brought under control by the combined efforts of the U.S. Coast Guard, the tanker's Netherlands-based shipping agent, and the Washington Department of Ecology.

The *Atigun Pass* was being towed by the tug *De Da* from Portland, Oregon to China to be scrapped. It was carrying about 25,000 gallons of residual fuel and other oils.

During the incident, the crews of the Foss Maritime and Crowley Marine tugs *Barbara Foss*, *Sea Victory* and *Sea Venture* performed admirably under difficult weather conditions to assist the tug *De Da* in recovering the drifting Atigun Pass. The services of professional salvers from Rivtow Marine, some of whom were airlifted to the drifting tanker, were also key to the success of the operation. Helicopter pilots from the U.S. Coast Guard Air Station Astoria and a private helicopter service, Helicopter AirTransport, also aided in the operation.

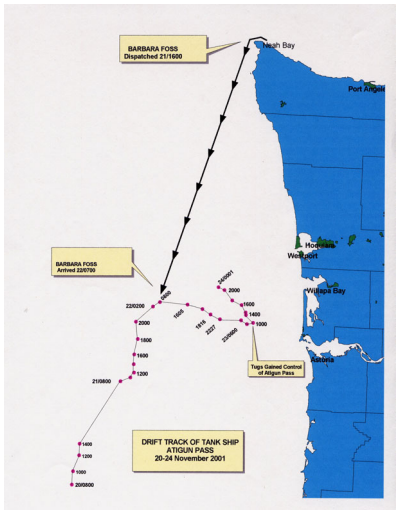
Picture courtesy of U.S. Coast Guard

Tugs De Da *and* Barbara Foss *work to get the drifting* Atigun Pass *back under tow. The* De Da *is in the foreground; the* Barbara Foss *can be seen beyond the tanker.*

Incident Chronology

Monday, November 19, 2001

At approximately 9 p.m., the towline between the 321-foot tug *De Da* and the 906-foot oil tanker *Atigun Pass* parted in a storm 96 miles off of Newport, Oregon. The tanker drifted in a northerly direction at up to four miles per hour in 20- to 30-foot seas and wind gusts up to 60 mph.



Drift track of tank ship Atigun Pass *(see page 12 for larger image)*

Tuesday, November 20, 2001

The *Atigun Pass*, shadowed by the tug De Da, drifted to the north northeast at 2.5 to 3.5 mph. Winds of 45 to 60 mph from the south to southwest pushed up seas of 20 to 30 feet. The *De Da*'s captain reported, "Crew are getting ready for re-terminating [*the tow wire*], but very-hard-doing."

Wednesday, November 21, 2001

The tug *De Da* was unable to recapture the primary tow "wire," a 2¾-inch 335-ton-test steel cable. The tug planned to attempt to recover the emergency towing cable trailing off the tanker. Communication with the tug's Chinese crew was problematic due to language difficulties.

The tanker drifted north to within 70 miles of the mouth of the Columbia River. There were gale-force winds and 22-foot seas from the south-southwest off the river's mouth at that time. The responsible party, SmitWijs, held-off contracting for additional tug assistance pending further attempts by the *De Da* to retrieve the tow wire.

The weather forecast was for an area of low pressure moving onto the Washington coast causing worsening weather Thursday, with winds reaching up to 58 mph, with higher gusts, and seas building to 34 feet. The direction of the wind and seas were expected to be from the southwest, which would cause the vessel to continue its drift to the northeast, in the direction of Willapa Bay and Grays Harbor. Given the tanker's drift rate and heading, Ecology's professional mariners projected that it could reach the beach within 24 to 32 hours.

After discussion with Captain John Thornton of Ecology's Columbia River Field Office, the U.S. Coast Guard Captain of the Port for Portland, Captain James Spitzer took strong action to protect the coast and ordered SmitWijs to arrange additional tug assistance and plan for a salvage contingency. SmitWijs contracted with Crowley Marine Services to assist in the rescue.

At 4 p.m., Ecology Spills Program Manager Dale Jensen directed Puget Sound Field Office Supervisor Norm Davis to call Foss Maritime to dispatch the rescue tug, *Barbara Foss*, from its station in Neah Bay to pre-position it near the drifting tanker. Ecology began notifying stakeholders of the potential threat.

Ecology's marine experts and its spill response team were placed on heightened alert to assist as needed during the holiday weekend. Ecology vessel inspector Valerie Scott and Captain Thornton rotated duty at the Coast Guard's crisis action center in Portland, Oregon during the long weekend.

Thursday, November 22, 2001

The Crowley tug *Sea Venture* departed Seattle at 6:15 a.m. to provide assistance. The passage was expected to take approximately 24 hours.

The Crowley tug *Sea Victory* departed from Astoria crossing the bar at about 7 a.m., arriving on scene at about noon. The tug's departure had been delayed for more than 12 hours by extreme swells on the Columbia River bar.

At 7 a.m., the *Barbara Foss* arrived with its specially trained crew, good maneuverability, specialized line recovery and towing systems, and salvage fendering (bumpers). The rescue tug crew worked to retrieve the emergency towing cable from the tanker. By 9:40 a.m., the *Barbara Foss*'s crew had recovered the tanker's emergency towline and passed it to the Chinese tug *De Da,* which began stretching out the line. However, at 11:40 a.m. it was reported that the synthetic portion of towline broke. The fully deployed emergency towing cable was now hanging down the *Atigun Pass*'s bow beside the broken primary tow wire where it was difficult to access.

The *Atigun Pass*, now about 60 miles from shore, continued to drift east toward the coast.

Friday, November 23, 2001

The tug *Sea Venture* arrived from Seattle at about 5:30 a.m... The *Atigun Pass* had drifted to within 27 miles of the coast overnight, and was continuing eastward at about 2 mph.

At 8:20 a.m., efforts began to shuttle a salvage team of six salvers from RivTow Marine (under contract with Smit) onto the pitching and rolling deck of the *Atigun Pass* from a U.S. Coast Guard helicopter. They brought a 450-foot, 9-inch-circumference synthetic salvage towline on-board as part of their equipment.

The tanker did not have a deployable anchor to help stop the tanker's drift if it were to enter shallow coastal waters. As a precautionary measure, Ecology's mariners assisted other experts in developing a plan to add seawater as ballast to the tanker. This contingency plan would direct the salvage team to flood seawater into the tanker to make it "sit" lower in the water, if a grounding became inevitable. Increasing the vessel's "draft" would help assure that, should the vessel ground, it would occur in deeper water outside the breaking surf, making future salvage efforts considerably more effective.

The Sea Venture's towline was passed to the salvage crew aboard the *Atigun Pass* (now about 24 miles off Washington's Long Beach Peninsula) at 10:10 a.m. via a U.S. Coast Guard helicopter on scene. The Sea Venture immediately started towing the *Atigun Pass* west at about 3 mph. Attempts were made to retrieve and reconnect the original emergency tow wire using the Sea Victory but failed. The 6-person salvage crew was lifted off of the tanker by commercial helicopter at about 3:30 p.m.

During the night, the *Sea Venture* reversed course to bring the *Atigun Pass* closer to the coast due to restrictions on the range of the helicopter that was to be used Saturday morning for taking the salvage crew out the ship. Winds backed to the southeast, but continued at gale strength.

At this point, the tanker's grounding remained a possibility, although significantly less likely.

Saturday, November 24, 2001

At 9:05 a.m., the six-man salvage team returned to the deck of the tanker (shuttled in groups of three by commercial helicopter). The crew of the *Barbara Foss* came into play again. At 11:26 a.m., aided by moderating winds and seas, the *Barbara Foss* retrieved the emergency towline that had been lost when the synthetic portion broke on November 22 and passed it again to the tug *De Da*. Once the towline was secured, the salvage team on the ship rigged a new 900-foot

emergency towline as a backup in case the *De Da* had another towline failure as it proceeded on its voyage towards Hawaii and, ultimately, China.

At 2:45 p.m., the *Sea Victory* was released from service. The *Barbara Foss* was released at 4:25 p.m. and began its return voyage to Neah Bay.

The Coast Guard required SmitWijs to have an additional tug escort until the *De Da* and *Atigun Pass* were well offshore. Crowley's tug *Sea Venture* provided this service.

Sunday, November 25, 2001

The 2,600-foot broken primary tow wire continued to dangle from the *Atigun Pass*'s bow. The half-mile-long steel cable weighed several tons and, without action to retrieve it, posed a risk to submerged pipelines, power and communication lines when it re-entered shallow water on the final leg of its voyage.

Appendix E

Incident Summary on the Freighter *BBC Peru*'s Loss of Propulsion

Incident Summary on the Freighter BBC PERU's Loss of Propulsion

At about 1000 on Friday, November 30, 2001, the BBC PERU experienced a main engine speed control system failure about 12.5 miles west of Buoy "J" at the entrance to the Strait of Juan de Fuca, and began drifting without propulsion. The 108-meter (354-foot), 6204 gross ton, general cargo ship, built in 2001, had departed Seattle's Pier 37 at 2225 on November 29th en route to Australia with a cargo of heavy equipment. The ship was carrying about 400 metric tons (about 110,000 gallons) of oil as fuel.

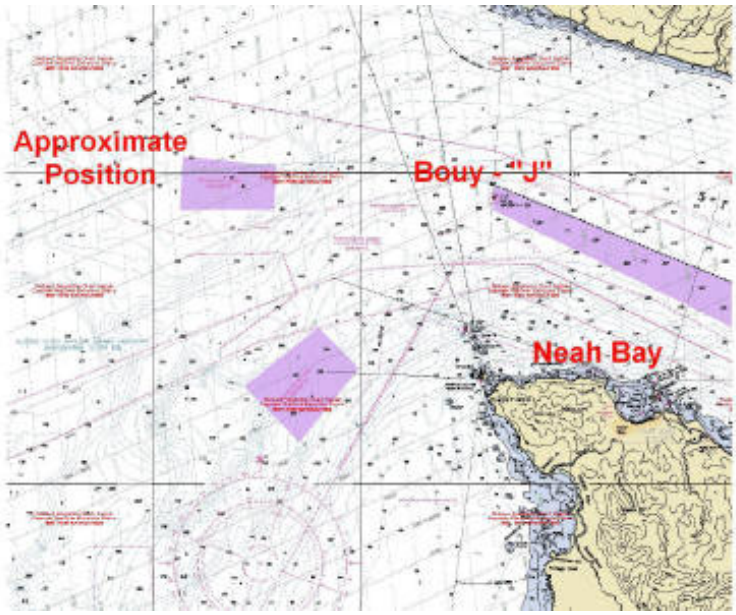


Chart section showing approximate location of the BBC PERU's loss of propulsion.

Winds on-scene were 15 to 25 knots out of the south-southeast. Swells averaged 8 to 12 feet. Wind waves were about 4 to 5 feet. Trouble for the BBC PERU began shortly after encountering these seas and swells as the ship's main engine over-speed and overload alarms began to sound, and the electronic speed control system began hunting (swinging excessively around the set-point).

At 1050, the U.S. Coast Guard's Puget Sound Vessel Traffic Service was notified via Tofino Traffic of the incident. The U.S. Coast Guard issued a Captain of the Port Order for the BBC PERU to obtain tug assistance.

The State-funded rescue tug stationed at Neah Bay, BARBARA FOSS, was the nearest available tug. The BARBARA FOSS was notified at 1115 and dispatched to assist, getting under way within 15 minutes to make the 21-mile run to the BBC PERU's position near latitude 48-30' north, longitude 125-06' west.

The marine weather forecast was for winds increasing to 40 knots out of the south with seas building to 15 feet that evening.

The BARBARA FOSS encountered the high seas on departing the more sheltered waters of the Strait and was forced to slow down. Meanwhile, aboard the BBC PERU, the engineering staff was attempting to effect repairs.

At 1325, with the BARBARA FOSS en route, the BBC PERU regained partial propulsion (about half-power, by manually controlling the fuel rack) and began the transit east to the Strait. The two vessels conducted a pre-escort conference via radio at 1340, and by 1355 the BARBARA FOSS had taken a position behind the BBC PERU, now making about 7.5 knots, to escort it to Port Angeles for repairs.

The BBC PERU was anchored without further incident at 2355 in Port Angeles harbor, under the guidance of a Puget Sound pilot, and with the assistance of the BARBARA FOSS.

Photo by Dodge Kenyon, Dept. of Ecology

BBC PERU at anchor in Port Angeles, Washington.

Follow-up investigation by an Ecology vessel inspector indicated that the electronic speed control system aboard the BBC PERU had been hunting the previous month when the ship was in Europe, but had given the crew no trouble during the voyage to Washington. A technician was aboard the ship to service the system when the ship left Seattle on November 29th en route for the pilot station. He reported finding no problems and of making only minor adjustments before departing the ship at the Port Angeles pilot station.

The ship was delayed for three or four days while a replacement fuel rack actuator (a component of the speed control system) was shipped. The replacement was installed and sea-trial successfully under the supervision of the ship's classification society.

The cause of the malfunction is still under investigation.

Appendix F

Incident Summary on the Drifting Container Ship *Andino*

Incident Summary on the Drifting Container Ship ANDINO

At 1409 on Sunday, December 9, 2001, the container ship, ANDINO, slowed its engine when the main engine turbocharger overheated. The main engine was shut down and the ship began drifting without propulsion in the vessel traffic lanes northwest of Pillar Point, Washington at 1436. The 177-meter (581-foot), 17,738 gross ton ship, built in 1993, was inbound for Seattle.

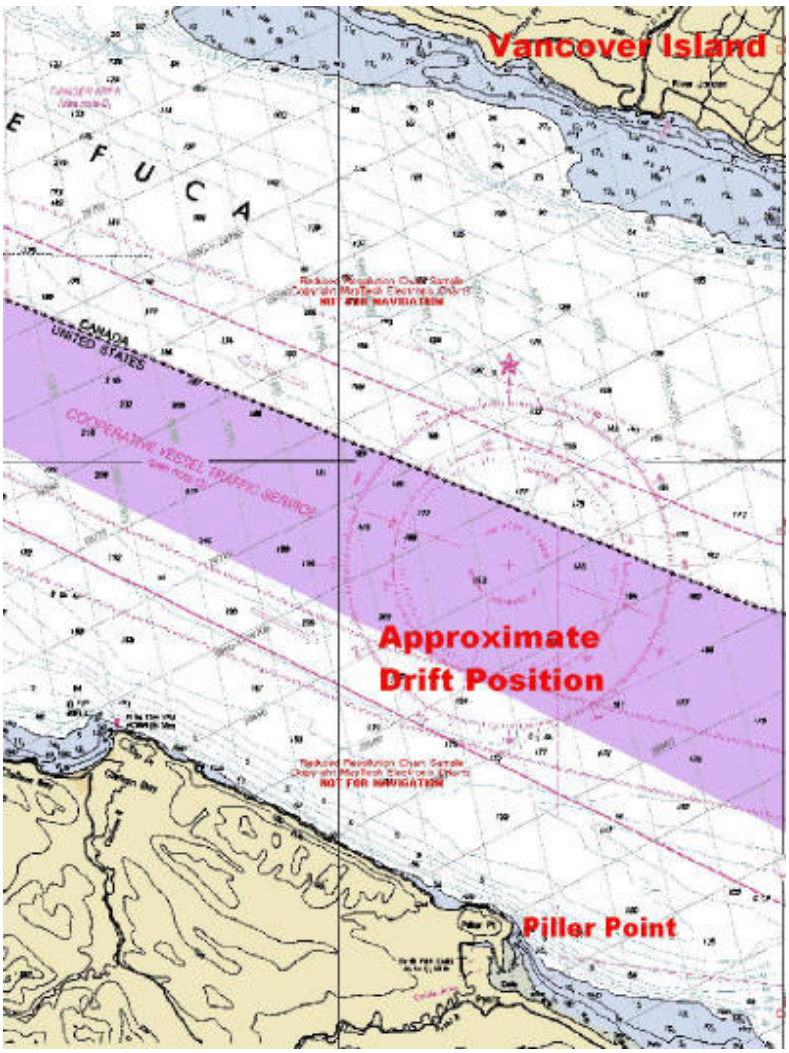


Chart section showing approximate location of the ANDINO's loss of propulsion.

Winds on-scene were 15 knots out of the southwest. Swells averaged 4 feet from the northwest. Wind waves were about 2 feet. The current was ebbing at about 1.5 knots.

The U.S. Coast Guard's Puget Sound Vessel Traffic Service was contacted by the ANDINO. The U.S. Coast Guard Captain of the Port, through Foss dispatch, put the State-funded rescue tug

stationed at Neah Bay, BARBARA FOSS on standby at 1425, and requested the tug's assistance at 1430. The BARBARA FOSS was underway by 1440 to make the 22.5-mile run to the ANDINO's position near latitude 48-16' north, longitude 124-08' west.

The BARBARA FOSS proceeded east against the ebbing current, arriving on-scene to assist the ANDINO at 1640. Once there the BARBARA FOSS stood by, and assisted with communications between the ship and the U.S. Coast Guard Marine Safety Office.

The ANDINO's Master planned to drift in the traffic separation zone while the ship's engineers effected repairs, and, if necessary, anchor in Canadian waters of the Strait, south of Vancouver Island. The Captain of the Port, however, required the ANDINO to be taken under tow, and, after some clarifying communications, the ANDINO's Master reluctantly agreed to connect a tow line from the BARBARA FOSS within about one-half mile of entering the outbound traffic lane.

The ANDINO was taken under tow for Port Angeles at 1830 by the BARBARA FOSS. At 1940, the tractor tug LINDSEY FOSS took over the towing operation. Temporary repairs were accomplished and the ANDINO regained partial propulsion as it reached Port Angeles, anchoring at 0020 (December 10th) under its own power with the LINDSEY FOSS standing by.

Follow-up investigation by an Ecology vessel inspector indicated that the bearing cage on the blower side of the turbocharger had failed. Shutting down the main engine had prevented additional damage and a possible turbocharger explosion. The crew was alerted to the bearing failure when an alarm sounded on the bridge indicating a high oil temperature in the turbocharger. Earlier printouts from the engine monitoring system (the ship is approved for unmanned machinery space operations) had indicated elevated bearing temperatures below the alarm threshold of 110 degrees Celsius, but these went unnoticed by the engineering crew.

Photo by Dodge Kenyon, Dept. of Ecology
Damaged turbocharger rotor.

The turbocharger was reportedly last overhauled in March 2001 and had only 4,000 operating hours on it since the overhaul. The manufacturer's recommended overhaul period is 16,000 hours.

Additional temporary repairs were done in Port Angeles and the ship proceeded to Seattle for more complete repairs and sea trials.

Photo by Dodge Kenyon, Dept. of Ecology
Container ship ANDINO at berth in Seattle, Washington.

Appendix G

Incident Summary on the Propulsion Loss of the Fishing Vessel *Deep Pacific* in a Severe Storm

Incident Summary on the Propulsion Loss of Fishing Vessel DEEP PACIFIC in a Severe Storm

On the evening of Thursday, December 13, 2001, the fishing vessel, DEEP PACIFIC, reported a main generator failure en route from Dutch Harbor to Seattle via Canada's Tofino Vessel Traffic Service. The vessel's diesel fuel supply was reportedly contaminated with water, putting the ship's propulsion in jeopardy as well. The 40-meter (130-foot), 140-gross ton ship built in 1981, was hove-to near latitude 48-36' north, longitude 125-26' west (about 13 miles southwest of Cape Beale, Vancouver Island). The incident occurred during a storm packing 50 to 55 knot sustained winds, gusts of up to 70 knots, and 6- to 8-meter (22- to 26-foot) seas. There were nine people aboard, and the vessel was carrying about 5,000 gallons of fuel.

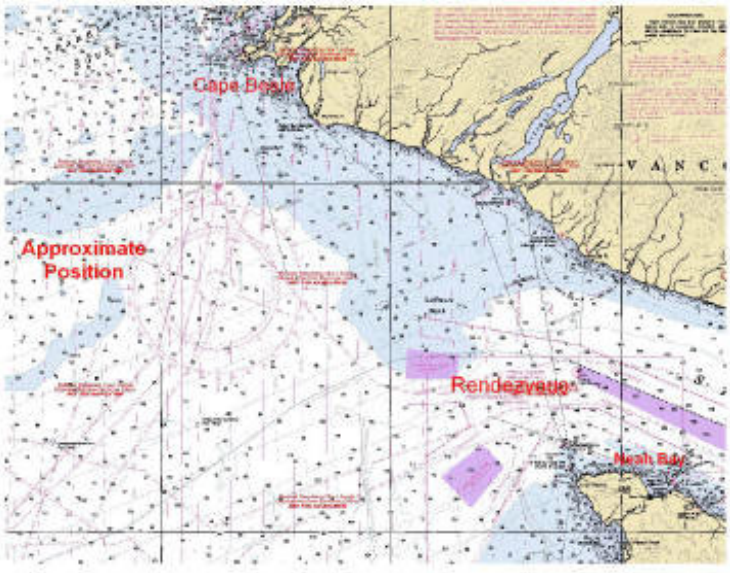


Chart section showing approximate position of the DEEP PACIFIC when help was requested, and the location where the DEEP PACIFIC came under the escort of the BARBARA FOSS.

Tofino Traffic contacted the U.S. Coast Guard's Puget Sound Vessel Traffic Service regarding the incident at 2015, and advised that the DEEP PACIFIC would need assistance from the state-funded rescue tug stationed at Neah Bay, BARBARA FOSS, if repairs could not be made. The U.S. Coast Guard cutter SHERMAN was diverted to stand by the DEEP PACIFIC until the rescue tug arrived. The BARBARA FOSS was released from standby duty at Neah Bay by Ecology at 2230 and immediately got underway.

Once the BARBARA FOSS was underway, the DEEP PACIFIC turned and ran before the seas for the relative protection of the Strait of Juan de Fuca and rendezvous with the rescue tug. The BARBARA FOSS proceeded west from Neah Bay, Washington, fighting high head winds and seas en route to the DEEP PACIFIC.

At 2301 the U.S. Coast Guard Captain of the Port issued an order requiring the DEEP PACIFIC to be escorted to Neah Bay by the tug and remain there until a transit plan had been submitted to the Coast Guard.

The BARBARA FOSS intercepted the DEEP PACIFIC at 0040 (December 14th) near Buoy "J" at the entrance to the Strait of Juan de Fuca. The DEEP PACIFIC was able to maintain propulsion and proceeded under escort from the BARBARA FOSS. Due to concern with maneuvering room in Neah Bay while contending with propulsion difficulties, the DEEP PACIFIC diverted to Port Angeles (with Coast Guard approval), arriving there at 0815.

Once at Port Angeles harbor, the ship slowed and subsequently lost propulsion. The BARBARA FOSS assisted the ship to the berth. Winds were still 40 to 50 knots when the BARBARA FOSS departed for Neah Bay.